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Filed : July 27, 2001

### REMARKS

Claims 1, 7, 11, 19, and 24 have been amended, Claims 4, 5, 6, and 12-18 have been cancelled without prejudice. As a result, Claims 1-3, 7-11, and 19-29 remain pending in the present application. Support for the amendments is found in the specification and claims as filed. Accordingly, the amendments do not constitute the addition of new matter. Reconsideration of the application in view of the foregoing amendments and the following comments is respectfully requested.

#### Objection to the Specification

The Examiner objected the abstract of the disclosure for containing more than one paragraph. The abstract has been amended to contain one paragraph. Accordingly, Applicants respectfully request the Examiner to withdraw the objection to the specification.

#### Amendment to the Specification

The specification has been amended on page 35 to accurately reflect the data presented in Table 1. The breaking energy of the sham group has been amended from 0.487 J to 0.0487 J. The reading 0.487 J for the breaking energy was an obvious typographical error that would be readily apparent to one having ordinary skill in the art. The breaking load is defined as the force necessary to break the bone, while the breaking energy is calculated as the area under the stress-strain curve up to the breaking point. See, e.g., the enclosed copy of Mizutani et al. (J. Nutr. Sci. Vitaminol., 46, 78-83, 2000). Therefore, the breaking energy and breaking load are numbers both derived from the same curve, and bear some relation to each other. One skilled in the art would recognize that the reading of "0.487" could not possibly be obtained from a bone exhibiting a breaking load of 95.53 N. Therefore this reading was an obvious typographical error that should have read "0.0487". Accordingly, entry of this amendment is respectfully requested.

#### Rejection under 35 U.S.C. § 102

The Examiner rejected Claims 1, 2-5, 7, 9-11, 14, 15, 18-20, 22, 27, and 28 under 35 U.S.C. § 102(b) as being anticipated by CN 1127070. CN 1127070 discloses a health promoting, nutritious milk powder containing resveratrol.

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As amended, Claim 1 recites, *inter alia*, a composition in a form selected from the group consisting of soft drinks, juice, tea, powdered juice, powdered soup, cookies, biscuits, cereals, chewable tablets, chewing gums, candies, gummy candies, wafers, senbei (Japanese rice crackers), dressing, sauce, powdered seasoning, bread, noodles, mochi (rice cake), fish paste products, tablets, paste, and jelly.

As amended, Claim 11 recites a method for increasing breaking load and breaking energy in bones of a mammal, comprising administering to the mammal an effective amount of at least one member selected from the compound represented by Formula (1) or a multimer thereof.

As amended, Claim 19 recites a method for preventing cerebral apoplexy in a mammal, comprising administering to said mammal an effective amount of at least one member selected from the compound represented by Formula (1) or a multimer thereof.

According to M.P.E.P. § 2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Since CN 1127070 does not disclose any form of composition as recited in amended Claim 1, CN 1127070 does not anticipate Claim 1. Additionally, CN 1127070 does not disclose methods for increasing breaking load and breaking energy in bones of a mammal or methods for preventing cerebral apoplexy in a mammal. Therefore, CN 1127070 does not anticipate Claims 11 and 19. Presently, all claims depend from Claims 1, 11, or 19.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection under 35 U.S.C. § 102(b).

Rejection under 35 U.S.C. § 103-Mizutani et al., Caspar et al., and CN 1127070

The Examiner rejected Claims 1-3, 5-11, and 20-25 under 35 U.S.C. § 103(a) as being unpatentable over Mizutani et al. (Biochemical and Biophysical Research Communications 1998, 253, pp. 859-863) and in further view of Caspar et al. (WO 00/38620 A2) and in further view of CN 1127070. According to the Examiner, Mizutani teaches that osteoporosis associated with estrogen deficiency after menopause is the most common cause of age-related bone loss. Caspar teaches the use of resveratrol for the treatment of periodontal disease. CN 1127070 teaches a composition in the form of milk powder comprising resveratrol.

According to M.P.E.P. 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.

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As amended, Claim 1 recites, *inter alia*, a composition in a form selected from the group consisting of soft drinks, juice, tea, powdered juice, powdered soup, cookies, biscuits, cereals, chewable tablets, chewing gums, candies, gummy candies, wafers, senbei (Japanese rice crackers), dressing, sauce, powdered seasoning, bread, noodles, mochi (rice cake), fish paste products, tablets, paste, and jelly.

None of the cited prior art references disclose or suggest a stilbene-like compound in a composition in the recited forms of Claim 1. Mizutani and Caspar disclose the use of resveratrol in *in vitro* experiments only. Although CN 1127070 disclose a milk powder, CN 1127070 does not disclose or suggest the use of a stilbene-like compound in any other forms of foods. Accordingly, the combination of references cited by the Examiner fail to support a *prima facie* showing of obviousness with regard to Claim 1 or any of its dependent claims.

As amended, Claim 11 recites a method for increasing breaking load and breaking energy in bones of a mammal, comprising administering to the mammal an effective amount of at least one member selected from the compound represented by Formula (1) or a multimer thereof.

None of the cited prior art references disclose or suggest a method for increasing breaking load and breaking energy in bones of a mammal. Mizutani et al. discloses that resveratrol directly stimulates cell proliferation and differentiation of osteoblasts *in vitro*. Therefore, Mizutani et al. does not disclose that resveratrol increases breaking load or breaking energy of bones. In fact, Example 1 on pages 34-35 of the specification shows that the breaking load and breaking energy are increased, even though bone density is decreased, when the resveratrol group is compared to the sham group. The disclosure in Mizutani et al. of stimulating cell proliferation and differentiation of osteoblasts would suggest that bone density would be increased, not that breaking load and breaking energy would be increased. Caspar et al. also discloses the use of resveratrol for osteogenic cell differentiation and mineralized bone formation on page 19 of the specification. Thus, like Mizutani et al., Caspar et al. gives no disclosure or suggestion of increasing bone breaking load and energy. CN 1127070 discloses a milk powder without disclosure or suggestion of the use of a stilbene-like compound for strengthening formed bone. Accordingly, the combination of references fails to suggest the invention of Claim 11.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw these rejections under 35 U.S.C. § 103(a).

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Rejection under 35 U.S.C. § 103-Toppo et al, Mizutani et al., and CN 1127070

The Examiner rejected Claims 12-19 and 26-29 under 35 U.S.C. § 103(a) as being unpatentable over Toppo et al. (U.S. Patent No. 6,048,903) and in further view of Mizutani et al. (Biochemical and Biophysical Research Communications 1998, 253, pp. 859-863) and in further view of CN 1127070. According to the Examiner, Toppo et al. teaches a link between hypercholesteremia and hypertension and the effect that resveratrol has on HDL/LDL levels. Mizutani teaches that resveratrol inhibits oxidation of low-density lipoprotein, preventing atherosclerotic changes as well as exhibiting a vasorelaxing activity in the isolated aorta of a rat. CN 1127070 teaches a composition in the form of milk powder comprising resveratrol.

According to M.P.E.P. 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.

As amended, Claim 19 recites a method for preventing cerebral apoplexy in a mammal, comprising administering to said mammal an effective amount of at least one member selected from the compound represented by Formula (1) or a multimer thereof.

None of the cited prior art references disclose or suggest a method for preventing cerebral apoplexy in a mammal. According to the Examiner, Toppo et al. teaches a link between hypercholesteremia and hypertension and the effect that resveratrol has on HDL/LDL levels. Mizutani teaches that resveratrol inhibits oxidation of low-density lipoprotein, preventing atherosclerotic changes as well as exhibiting a vasorelaxing activity in the isolated aorta of a rat. However, neither Toppo et al. nor Mizutani et al. disclose or suggest the use of stilbene-like compounds to prevent cerebral apoplexy.

CN 1127070 discloses a milk powder that can reduce blood lipids, prevent sclerosis of cerebral vessels, and prevent coronary heart disease. The composition disclosed in CN 1127070 contains a long list of ingredients, including resveratrol. In reference to resveratrol, CN 1127070 discloses that resveratrol can reduce fat content in the human body and cholesterol content in blood and lower the incidence of coronary heart disease. However, CN 1127070 does not disclose or suggest the use of stilbene-like compounds to prevent cerebral apoplexy.

Accordingly, the combination of references fails to suggest the invention of Claim 19, and Applicants respectfully request the Examiner to reconsider and withdraw these rejections under 35 U.S.C. § 103(a).

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CONCLUSION


In view of the foregoing amendments and comments, it is respectfully submitted that the present application is fully in condition for allowance, and such action is earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call the undersigned in order to resolve such issue promptly.

Respectfully submitted,

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Dated: April 21, 2003

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